



Flow Chart for Public Health Pertussis Investigations in Colorado September 2012

The purpose of this document is to provide guidance to local public health agencies to assist in the prioritization of pertussis investigations. The following algorithm is meant to assist local public health agencies with focusing limited resources on the most effective and important pertussis case investigation activities. Local public health agencies can choose to adopt this guidance, or, if local resources allow, continue to investigate all pertussis cases and contacts. The decision to prioritize pertussis investigations should be made based on resources available, and should focus on reducing transmission to those most at risk for severe complications or death from pertussis. The algorithm is not meant to be comprehensive of every situation encountered, and local public health agencies are encouraged to use their own judgment in prioritization. Regional epidemiologists and state health department staff are available for consultation.

Pertussis is a highly contagious respiratory illness that can cause severe illness, including death, particularly in infants under 12 months of age, since infants have not yet received the pertussis immunization series. The primary goal of public health is to prevent death and serious complications from pertussis. Therefore, Colorado Department of Public Health and Environment (CDPHE) differentiates between response activities that healthcare providers are expected to perform to meet standard of care, and those that public health must perform to protect persons at the most risk of complications and death from pertussis. When public health resources are limited, public health response activities should focus on preventing pertussis in high-risk persons, particularly infants under 12 months old and those likely to transmit pertussis to infants. CDPHE supports the U.S. Centers for Disease Control and Prevention and American Academy of Pediatrics' recommendations for the treatment of cases and prophylaxis of all close contacts. However, public health should focus resources on preventing pertussis transmission among high-risk persons. The definition of persons at high risk of developing severe disease, and persons at risk of exposing persons at high risk of severe disease, can be located at the bottom of the algorithm.

Please note: all confirmed, probable, and PCR-positive suspect cases should be reported to CDPHE through CEDRS, regardless of the level of case investigation activities undertaken by the local public health agency.

Your regional epidemiologist is available to assist you with prioritizing and investigating pertussis cases. Questions regarding prioritization, investigation, or pertussis in general can be directed to your regional epidemiologist or the CDPHE Communicable Disease Epidemiology Program at 303-692-2700.



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Triage reports of pertussis

When resources are limited, investigations can be prioritized. In general, an indication of a **high-risk*** case or contact will increase the priority of a report. (Please note that a limited investigation is necessary to determine if a case is **high risk***. Reports should be entered in CEDRS as usual whether investigated or not.)

Investigations that are highest priority:

1. Any confirmed, probable, or suspect case that is **high risk***
2. Any confirmed, probable, or suspect case that attends or works at an elementary school, preschool, or child care center

Investigations that are intermediate priority (any of the following that do not meet 1 or 2 above):

3. Culture or PCR-positive cases (includes those whose illness does not yet meet the clinical case definition)
4. Epi-linked cases that meet the clinical case definition

Investigations that are lowest priority (any of the following that do not meet 1, 2, 3, or 4 above):

5. Cases that meet the clinical case definition but have no epi-link or lab confirmation (probable cases)
6. Cases with classic symptoms (paroxysmal cough, post-tussive emesis, or whooping) and < 2 week cough duration with no testing or a negative test (suspect cases)
7. Cases with an epi-link that do not yet meet the clinical case definition (symptomatic contacts of a case [suspect cases])

Contact Provider

- Notify provider that public health will follow up
- Request pertussis immunization history and pertinent clinical information
- Ask about criteria that would determine a case to be **high-risk***
- Verify appropriate treatment
- Determine what exclusion recommendations were made
- Determine whether household contacts and high risk* contacts received chemoprophylaxis

Interview Case and Contacts

Case

- Determine clinical symptoms and onset of illness
- Provide education about period of communicability, method of transmission, and avoidance of high-risk persons/settings
- Recommend avoiding all public settings until completing 5 full days of antibiotics or 21 days after onset of cough if not treated

Contacts

- Identify **household members and high-risk* contacts**. These contacts need public health follow-up as noted below.
- If contacts are **not household or high-risk***, instruct case to inform his/her contacts of exposure and to seek advice from their own healthcare provider regarding chemoprophylaxis (public health does not need to follow up these contacts).

Follow-up interviews (For 5-county Denver metropolitan EIP area only)

- When resources are limited, if a case or contact meets the clinical case definition during the initial interview, a follow-up interview to determine entire cough duration can be suspended.

Symptomatic

Household and High-Risk* Contacts

Asymptomatic

- Educate the contact (or parent of contact)
- Facilitate evaluation, testing, treatment, and exclusion as appropriate
- Notify facility if elementary/preschool/child care
- Report contacts that meet the clinical case definition (cases)

- Educate the contact (or parent of contact)
- Advise symptom watch (If symptoms develop, contact health care provider and recommend to self-isolate until 5 full days of antibiotics)
- Recommend prophylaxis (responsibility of the contact)

Persons at risk of developing severe disease:

- Infants < 1 year of age

Persons who may expose persons at high risk for severe disease:

- Pregnant women
- Caregivers and household contacts of infants (e.g. family members, friends, babysitters, etc.)
- All those attending or working in a childcare or preschool setting if there is an infant < 1 year old or pregnant woman in the setting (however, any confirmed, probable, or suspect case that attends or works at an elementary school, preschool, or child care center should be investigated [highest priority])
- Health care workers with face-to-face contact with infants < 1 year old or pregnant/postpartum women
- Anyone else who may have close contact with infants, young children or pregnant women
- (At the discretion of the health department and if resources allow, persons who may expose others with high-risk medical conditions [severe lung disease, neuromuscular disease, immunodeficiency disorders] may be followed up.)

*High-risk cases and close contacts: